

CLAIMS

1. A method of motion compensated combination of a plurality of pictures of an input picture sequence to form an output picture at a temporal location between two of the input pictures, comprising: projecting input pixels from the input pictures to locations on the output picture using motion vectors assigned to those input pixels; counting the number of vectors from each input picture which point to a given pixel location on the output picture; and employing this count in controlling the mix of the pixels projected by those vectors used to produce the output pixel at the given pixel location.
2. A method according to Claim 1, comprising employing a non-linear function of the count in controlling said mix.
3. A method according to Claim 1 or Claim 2, comprising, where a plurality of vectors from one of the input pictures point to the given pixel location, assigning lower weight to the respective pixels of those vectors from that input picture for construction of the pixel at the given location.
4. A method according to any of the Claims 1 to 3, comprising, where a plurality of vectors point to the given pixel location, taking a median of the vectors, and using the vector closest to the median for construction of the output pixel.
5. A method according to any of the above claims, comprising, where a plurality of vectors from one of the input pictures point to the given pixel location, using an average of the respective pixels of those vectors as the contribution to the output pixel from that input picture.

BEST AVAILABLE COPY

- 10 -

6. A method of motion compensated combination of a plurality of pictures of an input picture sequence to form an output picture at a temporal location between two of the input pictures, comprising: projecting input pixels from the input pictures to locations on the output picture using motion vectors assigned to those input pixels; and mixing the respective pixels projected by the vectors onto the output picture to produce an output pixel at a given location, wherein, where a plurality of vectors from one of the input pictures project onto said given pixel location, giving increased weighting in controlling the mix to the respective pixels of vectors forming substantially conjugate pairs.

7. Video processing apparatus for forming an output picture at a selected temporal location from a sequence of input pictures having associated motion vectors comprising:

projection means for projecting input pictures to the temporal location of the output picture using the motion vectors associated respectively with said input pictures, to form projected pictures;

counting means for counting the number of motion vectors from the input pictures pointing towards each pixel of the respective projected picture for each of the input pictures; and

a first mixer for mixing the projected pictures, adapted to mix the pixels of projected pictures in varying proportions, such that at each pixel in the mix the relative proportion from each candidate picture is dependent on the number of motion vectors from the respective input picture pointing towards the spatial location of that pixel.

BEST AVAILABLE COPY

- 11 -

8. Apparatus according to Claim 7, including processing means for receiving from the counting means, for each input picture, a signal representing the number of motion vectors pointing towards each pixel location, and processing this signal to produce, for each projected picture, a smoothed prediction of quality signal which is passed to the mixer to control the mixing of candidate pictures.
9. Apparatus according to Claim 8, further comprising a second mixer which receives as its inputs the output of the first mixer and a selected one of the input pictures, adapted to mix its inputs in varying proportions according to an overall prediction of quality signal derived from the prediction of quality signals for each candidate picture.
10. Apparatus according to Claim 9, wherein the selected one of the input pictures is the picture temporally closest to the temporal location of the output picture.

BEST AVAILABLE COPY